## EPA Reg. No. 88685-3

label amended 7/8/2013

### **GLUFOSINATE-AMMONIUM TECHNICAL**

#### A Herbicide For Formulation Purposes Only

#### **ACTIVE INGREDIENT:**

Glufosinate-ammonium:

ammonium 2-amino-4(hydroxymethylphosphinyl)butanoate [CAS No. 77182-82-2]	96.3%
NERT INGREDIENTS:	3.7%
TOTAL	100.0%

## KEEP OUT OF REACH OF CHILDREN CAUTION

	FIRST AID				
If swallowed	<ul> <li>Call a Poison Control Center or doctor immediately for treatment advice.</li> <li>Have a person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the Poison Control Center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>				
lf in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a Poison Control Center or doctor for treatment advice.</li> </ul>				
If on skin or clothing	Take off contaminated clothing.     Rinse skin immediately with plenty of water for 15 - 20 minutes.     Call a Poison Control Center or physician for treatment advice.				
If Inhaled	Move person to fresh air.     If person is not breathing, call 911 or an ambulation preferably by mouth-to-mouth if possible.     Call a Poison Control-0				
neurotransmi specific antid	an interfere with ster function. So ote. If ingested, wed by charcoal				
	emergencies call abel with you whe				
Manufact Orion GF 12230 E. De Yuma, AZ tel. 928-342	S, LLC  PI Norte 85367  88685-3    kg)				

## PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing dust. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. Wear protective eyewear.

#### **ENVIRONMENTAL HAZARDS**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

This product may be used only to formulate end-use products:

- (1) with the following uses:
  - · weed control of emerged weeds in noncrop areas
  - post emergence weed control in berries; citrus (crop group 10-10); grapes; olives; pome fruits (crop group 11-10); stone fruits (crop group 12-12); and tree nuts (crop group 14 including pistachios)
  - weed control prior to emergence of any conventional variety of canola, sweet corn, corn, cotton, rice, soybean and sugar beets
  - post emergence weed control in conventional cotton using a hooded sprayer
  - desiccation of potato vines
  - for elimination of non-glufosinate-ammonium tolerant corn, soybean, rice and cotton plants in seed production;
- (2) uses for which the U.S. EPA has accepted the required data and/or citations of data that the formulator has submitted in support of registration;
- (3) specific uses not listed on the manufacturing product label if the formulator, user group or grower has complied with U.S. EPA submission requirements regarding support of such uses; and
- (4) uses for experimental purposes that are in compliance with U.S. EPA requirements.

Do not use this product to formulate end-use products that allow for residential use.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store in original container tightly closed and in a safe place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into processing equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. Offer the drum for recycling, if available.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. The Directions for Use of this product reflect the opinion of experts based on field use and tests. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ORION GFS, LLC or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of ORION GFS, LLC and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ORION GFS, LLC and Seller harmless for any claims relating to such factors.

ORION GFS, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or ORION GFS, LLC, and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ORION GFS, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, ORION GFS, LLC or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ORION GFS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE, AT THE ELECTION OF ORION GFS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT, OR COMPENSATION LIMITED TO DAMAGES NOT EXCEEDING THE FAIR MARKET PURCHASE PRICE, AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES.

ORION GFS, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of ORION GFS, LLC.

#### **DATA PACKAGE BEAN SHEET**

Date: 11-Sep-2012 Page 1 of 2 Decision #: 468534

DP #: (405235)

PRIA

Parent DP #:

**Submission #: 921730** 

E-Sub #:

#### \* \* \* Registration Information \* \* \*

Registration:	88685-G - GLUFOSINATI	E-AMMONIUM TI	ECHNICAL		
Company:	88685 - ORION GFS, LLC				
Risk Manager:	RM 23 - Kathryn Montague - (70	3) 305-1243 Room# I	PY1 S-7332		
Risk Manager Reviewer:	Kaitlin Keller KKELLER			10.000	
Sent Date:		PRIA Due Date			
Type of Registration:	Product Registration - Section 3				
Action Desc:	(R310) NEW PRODUCT; NON-F	AST TRACK (INCLU	DES REVIEWS C	F PRODUCT CHEMIST	
Ingredients:	128850, Glufosinate(96.3%)				
	* * * Data	a Package Inf	ormation *	* *	
Expedite:	Yes No	Date Sent	: 11-Sep-2012	Due Back:	
DP Ingredient:	128850, Glufosinate			,	
DP Title:			T- VALUE		
CSF Included:	Yes No Label I	ncluded:   Yes	No Paren	t DP #:	
Assigned T	0	Date In	Date Out		
Organization: RD / 1	rrb			Last Possible Science Due Date: 2	29-Jan-2013
Team Name: CHEM	1			Science Due Date:	-
				Sub Data Package Due Date:	
Contractor Name:					

#### \* \* \* Studies Sent for Review \* \* \*

Printed on Page 2

#### \* \* \* Additional Data Package for this Decision \* \* \*

No Additional Data Packages

#### \* \* \* Data Package Instructions \* \* \*

This is an application for a new technical product. To support the registration of this product, they have submitted 6 volumes of product chemistry data which I am forwarding to you along with copies of the proposed CSF, label, application, and cover letter. Please review the data to determine if it supports the registration of this product. If you have any questions or need anything else, please feel free to contact Kaitlin Keller (308-8172).

Decision#: (468534)

MRID MRID Status	Citation Reference	Guideline	86-5 Status
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903905	Li, H. (2010) Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient Water Solubility, Vapor Pressure, Hydrolysis and Photolysis. Project Number: NCJY/2010/053. Unpublished study prepared by Nutrichem Laboratory Co., Ltd. 43p.		Pass (27-Aug-2012)
48903906	Hawk, R. (2009) Stability of Metals of Glufosinato De Amonio TC. Project Number: 46644, FOBR/6/26703. Unpublished study prepared by Microquim S.A. 79p.	830.6313/Stability to normal and elevated temperatures, metals, and metal ions	Pass (27-Aug-2012)

# 21-Day Screen Completed by Contractor

21-Day Expires on 8-31-12

Jacket # 88685-G MRID# 489039

Content Screen: Recommend to Pass/Fail

11-3 Review: Pass/Fail/NA

Overall Status: Recommend to Pass/Fail

Transfer This Jacket to:

STEPHEN SeHAIBLE

## Completion of 21-Day Content Screen

PM - 33

**EPA Reg**. #(File Symbol) δ8685-6

Decision # D 468534

Data package delivered to you on <u>४/२५/१२</u>. (date)

Jacket/Mini-jacket will be transferred to you today. (Pick up from Document Center)

Thank you, 🕅

Registration Division's 21-Day Content Team

8/23/12 uting on admin bg.

## Memorandum

Date:	08/22/12
To:	PM 23 , Regulatory Manager
From:	Information Services Branch, ITRMD
indicati	on that MRIDs for the enclosed studies have sted to OPPIN.
from th	expect that it will be approximately 5 days above date before the study-level data is le in OPPIN.
If v	
•	ou have any questions about this process, ontact Teresa Downs (305-5363).

## Material Sent for Data Extraction

Reg. # <u>88685</u>
Description: New Product
Material(s) Sent to Data Extraction Contractors:
New Stamped Label Dated 2-26-13
Notification Dated
New CSF(s) Dated
☐ Other:
Decision #: 468534
☐ Other Action/Comments:
File this coversheet and attached materials in the jacket. It must be well organized and clipped together, NOT STAPLED. Then give the jacket with the coversheet and materials to staff in the Information Services Center (ISC) (Room S-4900). If a jacket is full or only available as an image, please file materials in a new jacket and bring it down to the (ISC). For further information please call 703-605-0716.
Reviewer: Grant Rowland
Phone: 347-6254 Division: <u>RD/HB</u> Date: 2-27-13



#### U.S. ENVIRONMENTAL PROTECTION AGENCY Office of Pesticide Programs Registration Division (7504P) Ariel Rios Building 1200 Pennsylvania Ave., NW Washington, D.C. 20460

EPA Registration Number:

Date of Issuance:

Unconditional

88685-3

FEB 2 6 2013

NOTICE OF PESTICIDE:

X Registration Reregistration

Term of Issuance:

Name of Pesticide Product:

Glufosinate-Ammonium Technical

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Orion GFS, LLC 12230 E. Del Norte

Yuma, AZ 85367-7355

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act, Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is registered in accordance with FIFRA sec 3(c)(5) provided that you:

- 1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
- 2. Make the following label revisions
  - a. Revise the EPA Reg No. to 88685-3
  - b. Assure that the establishment number and net content are also added to the label.
- 3. Submit one copy of the revised final printed label before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.

If you have any questions regarding the Notice, please contact Grant Rowland at (703) 347-0254 or rowland.grant@epa.gov.

Signature of Approving Official:

Kathryn Montagué Product Manager 23

Herbicide Branch

Registration Division (7505P)

FFR 2 6 2013

EPA Form 8570-6

Revised proposed label 2/23/2013

#### **GLUFOSINATE-AMMONIUM TECHNICAL**

#### A Herbicide For Formulation Purposes Only

#### **ACTIVE INGREDIENT:**

Glufosinate-ammonium:

ammonium 2-amino-4(hydroxymethylphosphinyl)butanoate	e [CAS No. 77182-82-2]	96.3%
INERT INGREDIENTS:		3.7%
TOTAL		100.0%

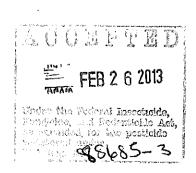
## CAUTION

	FIRST AID				
If swallowed	<ul> <li>Call a Poison Control Center or doctor immediately for treatment advice.</li> <li>Have a person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the Poison Control Center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>				
lf in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a Poison Control Center or doctor for treatment advice.</li> </ul>				
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>Call a Poison Control Center or physician for treatment advice.</li> </ul>				
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible.</li> <li>Call a Poison Control Center or doctor for further treatment advice.</li> </ul>				

**Note to Physician:** Glufosinate-ammonium is a glutamine synthetase inhibitor and can interfere with neurotransmitter function. Symptoms may be delayed by up to 48 hours following ingestion. There is no specific antidote. If ingested, endotracheal intubation and gastric lavage should be performed as soon as possible followed by charcoal and sodium sulfate administration.

For medical emergencies call the National Pesticide Information Center 1-800-858-7378. Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment.

Manufactured for: Orion GFS, LLC 12230 E. Del Norte Yuma, AZ 85367 tel. 928-342-3489



## PRECAUTIONARY STATEMENTS Hazards to Humans and Domestic Animals CAUTION

Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing dust. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash clothing before reuse. Wear protective eyewear.

#### **ENVIRONMENTAL HAZARDS**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

#### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

This product may be used only to formulate end-use products:

(1) with the following uses:

į

- weed control of emerged weeds in noncrop areas
- · control of weeds and grasses in residential and industrial areas
- weed control in almonds, apples, bananas, bushberries (Crop Subgroup 13B), grapes, juneberries, lingonberries, tree nuts (Crop Group 14), pistachios, rice and salal
- desiccation of potato vines
- weed control in glufosinate-ammonium tolerant canola, corn, cotton, soybeans and sugar beets
- for elimination of non-glufosinate-ammonium tolerant corn, soybean, rice and cotton plants in seed production;
- (2) uses for which the U.S. EPA has accepted the required data and/or citations of data that the formulator has submitted in support of registration;
- (3) specific uses not listed on the manufacturing product label if the formulator, user group or grower has complied with U.S. EPA submission requirements regarding support of such uses; and
- (4) uses for experimental purposes that are in compliance with U.S. EPA requirements.

#### STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

Pesticide Storage: Store in original container tightly closed and in a safe place.

**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.

**Container Disposal:** Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into processing equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. Offer the drum for recycling, if available.

**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. The Directions for Use of this product reflect the opinion of experts based on field use and tests. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ORION GFS, LLC or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of ORION GFS, LLC and Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ORION GFS, LLC and Seller harmless for any claims relating to such factors.

ORION GFS, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or ORION GFS, LLC, and Buyer and User assume the risk of any such use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, ORION GFS, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

To the extent consistent with applicable law, ORION GFS, LLC or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ORION GFS, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE, AT THE ELECTION OF ORION GFS, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT, OR COMPENSATION LIMITED TO DAMAGES NOT EXCEEDING THE FAIR MARKET PURCHASE PRICE, AND SHALL NOT INCLUDE INCIDENTAL OR CONSEQUENTIAL DAMAGES.

ORION GFS, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of ORION GFS, LLC.



#### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

22/JAN/2013

**MEMORANDUM** 

Subject:

Name of Pesticide Product: Glufosinate-Ammonium Technical

EPA Reg. No. /File Symbol: 88685-G

D405236

DP Barcode:

468534

Decision No: Action Code:

R310

PC Code:

128850 (glufosinate)

From:

Eugenia McAndrew, Biologist

Technical Review Branch

Registration Division (7505P)

To:

EM Carlos Team Leader Toxicology-Team Leader Kathryn Montague, RM Team 23

Herbicide Branch

Registration Division (7505P)

Applicant:

Orion GFS, LLC

12230 E. Del Norte

Yuma, Az 85367-7355

FORMULATION FROM LABEL:

Active Ingredient(s):

% by wt.

Glufosinate-ammonium

96.3

Other Ingredients:

3.7 100.0

ACTION REQUESTED: The Risk Manager requests: "The applicant has submitted this package to propose a new registration for this technical product. They have claimed that the product is substantially similar to EPA Reg. No. 88685-1."

**BACKGROUND**: Orion GFS, LLC has applied for registration of Glufosinate-Ammonium Technical, EPA File Symbol 88685-G, claiming similarity to Glufosinate-Ammonium Technical, EPA Reg. No. 88685-1. Both products are technical grade for formulation purposes only. The submission includes a label, basic CSF dated July 10, 2012, data matrix and company letter.

A search the OPP electronic file database shows that no acute toxicity data were submitted for the cited product, 88685-1, because it was registered based on similarity to another product. The data matrix cites acute toxicity studies with MRIDs 001424-31, -32, -36, -37, -38 and -39. These studies were submitted to support the registration of an Experimental Use Permit, 8340-EUP-RN. The studies were conducted on technical grade test material and were reviewed by the Health Effects Division (Saunders; 8340-EUP-RN; 18/APR/1985). TRB will consider the suitability of these studies to support the registration of the proposed product.

#### RECOMMENDATIONS:

- 1. TRB reviewed the cited acute toxicity data citations and concluded that these data may be used to support the registration of the proposed product.
- 2. The acute toxicity profile for the proposed product, Glufosinate-Ammonium Technical, EPA File Symbol 88685-G, is as follows:

acute oral toxicity	III	cited	MRID 00142431, 00142432
acute dermal toxicity	III	cited	MRID 00142436, 00142437
acute inhalation toxicity	III	cited	MRID 00144337
primary eye irritation	III	cited	MRID 00142438
primary skin irritation	IV	cited	MRID 00142438
dermal sensitization	negative	cited	MRID 00142439

4. The proposed basic CSF submitted for 88685-G must be reviewed and accepted by the TRB Product Chemistry Team.

**LABELING**: Based on the toxicity profile above, the following are the precautionary and first aid statements for this product as obtained from the Label Review System:

PRODUCT ID #:

088685-00003

**PRODUCT NAME:** 

Glufosinate-Ammonium Technical

PRECAUTIONARY STATEMENTS

**SIGNAL WORD:** 

CAUTION

#### Hazards to Humans and Domestic Animals:

Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Avoid breathing dust. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse. [Wear protective eyewear.]\*

\*[Protective eyewear may be specified, if appropriate.]

#### First Aid:

#### If swallowed:

- -Call a poison control center or doctor immediately for treatment advice.
- -Have person sip a glass of water if able to swallow.
- -Do not induce vomiting unless told to by a poison control center or doctor.
- -Do not give anything by mouth to an unconscious person.

#### If on skin:

- -Take off contaminated clothing.
- -Rinse skin immediately with plenty of water for 15-20 minutes.
- -Call a poison control center or doctor for treatment advice.

#### If inhaled:

- -Move the person to fresh air.
- -If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- -Call a poison control center or doctor for further treatment advice.

#### If in eyes:

- -Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- -Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- -Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-xxx-xxxx for emergency medical treatment information.



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

813warter

the production

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION OFFICE OF PESTICIDE PROGRAMS REGISTRATION DIVISION (7505P)

DP BARCODE No.: 405235; FILE SYMBOL No.: 88685-G; PRODUCT NAME: Glufosinate-Ammonium Technical; DECISION No.: 468534; PC Code(s): 128850; ACTION CODE: R310; FOOD Use: Yes

DATE:

February 7, 2013

SUBJECT:

Product Chemistry Review of "Glufosinate-Ammonium Technical" TGAI/MUP

FROM:

Shyam Mathur

Product Chemistry Team Leader

Technical Review Branch/RD (7505P)

TO:

Kathryn Montague, RM 23

Herbicide Branch / RD (7505P)

DP BARCODE: 405235 DECISION No.: 468534

REGISTRATION NO./FILE SYMBOL NO.: 88685-G PRODUCT NAME: Glufosinate-Ammonium Technical

PC CODE: 128850

REGISTRANT: Orion GFS, LLC

USE: Herbicide

FOOD USE: Yes [X] No [1]

MRID Numbers: 489039-01 to 489039-06

#### INTRODUCTION:

The registrant Orion GFS has submitted an application for the registration of the Glufosinate-Ammonium technical grade active ingredient. The technical glufosinate-ammonium is produced by

which is represented in the proposed basic CSF (dated 07-10-2012). In support of the basic CSF, the registrant has submitted group A & group B product chemistry data with 489039-01 to 489039-06. The registrant has claimed that the proposed product is substantially similar to the registered product with Reg. No. 88685-1. TRB has been asked to evaluate and determine the acceptability of the proposed basic CSF (dated 07-10-2012) and the supporting product chemistry data and as well as determine substantial similarity to the cited product.

#### SUMMARY OF FINDINGS:

1. The findings for Group A guideline data were as follows:

830.1550 (product identity & composition): The registrant submitted a basic CSF (dated 07-10-2012). The product chemistry data corresponding to this guideline submitted on the CSF and in MRID 489039-01 satisfy the data requirements of 40CFR§158.320. The nominal concentration 96.3% for AI concurs with the proposed product label claim nominal concentration 96.3%.

- 830.1600 (description of materials used to produce the product): The product chemistry data submitted corresponding to this guideline satisfy the data requirements of 40CFR§ 158.325 [MRID No. 489039-01].
  - 830.1620 (description of production process): The registrant provided detailed information on the production process for technical/mup. The product chemistry data submitted corresponding to this guideline satisfy the data requirements for 40CFR§158.332[MRID No. 489039-01].
  - 830.1670 (discussion on the formation of impurities): The registrant has provided information on the formation impurities and the mechanism of the formation the impurities. Only impurity was identified during the analysis. The product chemistry data submitted corresponding to this guideline satisfy the data requirements for 40CFR§158.340[MRID No. 489039-01].
  - 830.1700 (preliminary analysis): The product chemistry data submitted corresponding to this guideline to support the claims on the CSF and satisfy the data requirements of 40CFR§158.345[MRID No. 489039-02 to -04]. Impurities are identified and the upper limits stated on the CSF for each are supported by the five-batch analysis.
  - 830.1750 (certified limits): The product chemistry data submitted corresponding to this guideline satisfy the requirements of 40CFR§158.350 [MRID No. 489039-01]. The registrant has proposed standard certified limits for the active ingredient whereas the proposed certified limits for the impurities are based on the five batch analysis.
  - 830.1800 (enforcement analytical method): The product chemistry data submitted corresponding to this guideline satisfy the data requirements of 40CFR§158.355. The active ingredient content was determined by HPLC-UV using external standard method. The analytical method was validated for precision, linearity, and accuracy [MRID No. 489039-02 to 489039-04].
    - The product chemistry data submitted corresponding 830 series group B guideline (physicalchemical properties) satisfy the data requirements of 40CFR§158.310(e).

#### CONCLUSIONS:

The TRB has reviewed the product chemistry data submitted for glufosinate-ammonium Technical (produced by the proposed basic CSF and has concluded that:

- "1. The product chemistry data submitted for guideline 830 Series group A are acceptable.
- 2. The proposed basic CSF (dated 07-10-2012) is acceptable. The registrant has listed new impurity in the proposed basic CSF (dated 07-10-2012) which is not present in the cited product [Reg. No. 88685-1; basic CSF (dated 9-10-2011)]. According to Dr. Byron Backus (toxicologist TRB), the presence of this additional impurity will not cause any adverse health & environment effects based on its chemical structure. This impurity is considered as not of toxicological concern.
- 3. The group B product chemistry data submitted for the proposed product are acceptable.
- 4. The proposed product with File Symbol No. 88685-G was determined to be substantially similar to cited product with Reg. No. 88685-1 from product chemistry point of view. The proposed product contains new impurity of non-tox concern which is not present in the cited product. Also there is significant difference in the pH values of the proposed and cited product (7.0 in proposed vs 3.75 in cited). However, this conclusion is contingent upon the acute tox studies determinations.

830.1550. Product identity & composition: (MRID No. 489039-02)

Common Name: Glufosinate-ammonium

Chemical name (CAS): Ammonium (±)-2-amino-4-(hydroxymethylphosphinyl) butanoate

(IUPAC): Ammonium DL-homoalanin-4-yl(methyl)phosphinate

CAS No.: 77182-82-2

PC Code No.: 128850

Empirical Formula: C<sub>5</sub>H<sub>15</sub>N<sub>2</sub>O<sub>4</sub>P

Molecular Weight: 198.2 g/mol

Structural Formula:

GLN	Requirement	MRID	Status	Details and /or Deficiency
830.1550	Product Identity and composition	489039-01	А	Registrant has submitted a CSF basic formulation dated 07-10-12 with nominal concentration of 96.3% for Al. The nominal concentration agrees with the label claim nominal concentration.
830.1600	Description of materials used to produce the product	489039-01	А	Suppliers are identified and MSDSs are provided for all the inert ingredients used to produce the product.
830.1620	Description of production process	489039-01	А	batch production process has been described in details. All the significant parameters for each step of the manufacturing process have been provided.
830.1670	Discussion of formation of impurities	489039-01	A	Impurities discussed and identified. Registrant has identified only impurity (of nontoxicological concern) and has provided mechanism of its formation. The impurity has been identified during the five batch analysis.
830.1700	Preliminary analysis	489039-02 To 489039-04	А	The five batch analysis of the glufosinate- ammonium technical was conducted to determine the contents of the active ingredient and the impurities. The HPLC-DAD detector with external standard technique was used for the determination of the active ingredient and the impurities. The identity of the active ingredient was further confirmed by NMR and MS techniques. The analytical methods were validated for linearity, accuracy, precision, LOQ and LOD.
830.1750	Certified limits	489039-01	A	CSF standard limits for Al. Proposed limits for the impurities are based on five batch analysis.
830,1800	Enforcement analytical method	489039-02	Α	HPLC-DAD method with external standard technique.

<sup>\*</sup>Manufacturing process information may be entitled to confidential treatment\*

830 Series Subgroup B (Physical-Chemical Properties)

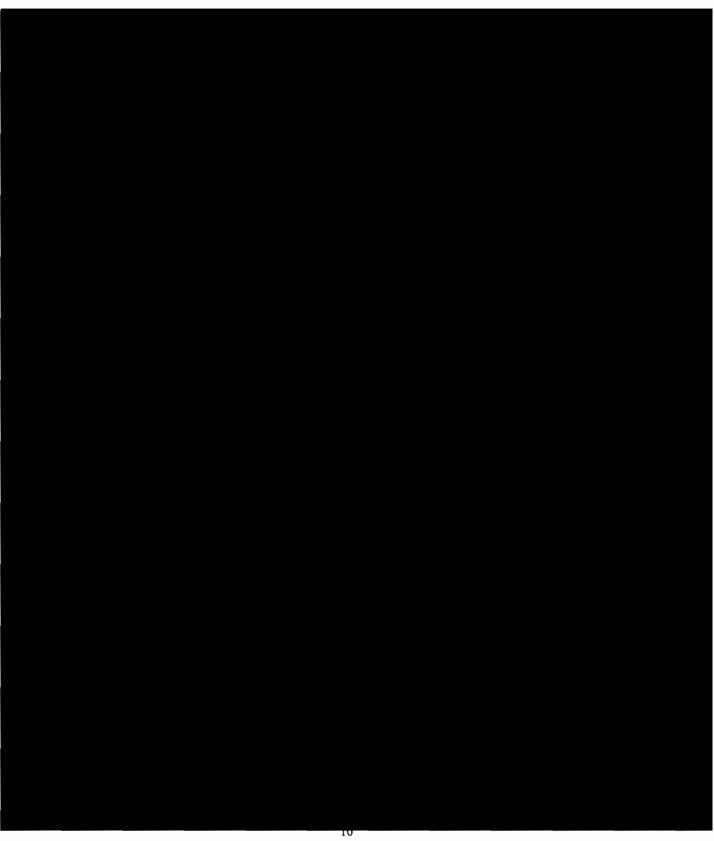
GLN	Requirement	MRID	Status	Result or Deficiency
830.6302	Color	489039-05	Α	White
830.6303	Physical state	489039-05	Α	Crystalline powder
830.6304	Odor	489039-05	Α	Slightly pungent
830.6313	Stability to normal and elevated temperatures, metals, and metal ions	489039-06	А	Stable at normal and elevated (54 °C) conditions fo 14 days as determined also with Fe and Al metals
830.6314	Oxidation/reduction: chemical incompatibility		NA	
830.6315	Flammability		NA	
830.6316	Explodability		NA	
830.6317	Storage stability		NA	
830.6319	Miscibility		NA	
830.6320	Corrosion characteristics			
830.7000	рН	489039-05	Α	6.13 @ at room temperature
830.7050	UV/Visible absorption		NA	
830.7100	Viscosity		NA	
830.7200	Melting point	489039-05	Α	210.1°C
830.7220	Boiling point		NA	
830.7300	Density	489039-05	Α	1.37 g/mL @ 20 °C
830.7370	Dissociation constants in water (DC)	489039-05	А	pKa = 9. 12 @ room temperature
830.7550	Partition coefficient	489039-05	Α	log P <sub>o/w</sub> = -4.03 @ 25 °C
830.7840	Water solubility	489039-05	Α	Distilled water = 1375 g/L n-Hexane = <1g/L Ethyl acetate = < 1 g/L Acetone = <1 g/L
830.7950	Vapor pressure	489039-05	Α	2.93 x 10 <sup>-5</sup> Pa @25 <sup>0</sup> C

A = Acceptable; N = unacceptable (see Deficiency); N/A = Not Applicable; G = Data gap; I = In progress; U = Up-grade (additional information required); W = waivers

830.1800 (enforcement analytical method) (MRID No. 489039-04)

The contant of the glufosinate-ammonium technical was done on HPLC-DAD fitted with a Eclipse XDB-C<sub>8</sub> column (150 x 4.6 mm, 5  $\mu$ m). The content of propiconazole was measured by HPLC-UV (detector operating 230 nm) with external standard quantitative method. The method was validated for linearity, range of linearity, precision and accuracy.

Details of the method can be seen in the MRID given above.



### ORION GFS, LLC

August 2, 2012

Document Processing Desk (APPL)
Office of Pesticide Programs (P7504C)
Environmental Protection Agency
Room S-4900, One Potomac Yard (South Building)
2777 S. Crystal Drive
Arlington, VA 22202

Attn:

Kathryn Montague (PM 23), Herbicide Branch, Registration Division

Dear Ms. Montague:

Subject:

Glufosinate-Ammonium Technical (EPA File Symbol 88685-x):

Registration Application

Orion GFS, LLC wishes to register a technical product that is similar to other currently registered products, including our own. The percent active ingredient on the label of this product is not identical to that of our currently registered product, EPA Reg. No. 88685-1.

In support of this application we have enclosed the following:

Application for Pesticide Registration (8570-1)
Confidential Statement of Formula (8570-4)
Certification with Respect to Citation of Data (8570-34)
Data Matrix (8570-35)
Proposed label (6 copies)
Supporting studies (3 copies, with Data Transmittal Document)

We have concluded that this regulatory action falls in PRIA II Category R310, for which the fee is \$4807. Confirmation of payment is enclosed.

Please contact me if you have any questions.

Sincerely,

Robert Hawk

Source Dynamics LLC Agent for Orion GFS, LLC

lated Hotel

tel. 928-342-3489

#### **DATA TRANSMITTAL DOCUMENT**

Name and Address of Data Submitter Orion GFS, LLC 12230 E. Del Norte Yuma. AZ 85367-7355

Regulatory Action in Support of Which This Package is Submitted
Registration Application (88685-x): Glufosinate-Ammonium Technical

Transmittal Date August 2, 2012

Submitted Studies (3 Copies)

- R. E. Hawk, "Glufosinate-Ammonium Technical: Product Identity, Description of Materials, Manufacturing Process, Discussion of Impurities and Certification of Limits," Report No. OG1207C (July 10, 2012), 86 pages, OPPTS 830.1550, 830.1600, 830.1620, 830.1670 and 830.1750
- 48903902 D. Rao, "Preliminary Analysis and Enforcement Analytical Method of Glufosinate-Ammonium TGAI," Study No. NC-2008-063a (February 15, 2009), 128 pages, OPPTS 830.1700
- 48903903 H. Li, "Validation of Analytical Methodology for the Assay of [Name Redacted] in Glufosinate-Ammonium TGAI," Study No. NC-2008-063b (February 15, 2009), 43 pages, OPPTS 830.1700
- 48903904 H. Li, "Validation of Analytical Methodology for the Assay of Active Ingredient in Glufosinate-Ammonium TGAI," Study No. NC-2008-063 (February 15, 2009), 37 pages, OPPTS 830.1700 and 830.1800
- 48903905 H. Li, "Chemical and Physical Characterization of Glufosinate-ammonium TGAI: Color, Physical State, Scent, pH, Melting Point, Density, Dissociation Constant, Octanol/Water Partition Coefficient, Water Solubility, Vapor Pressure, Hydrolysis and Photolysis," Study No. NCJY-2010-053 (May 11, 2010), 42 pages, OPPTS 830.6302, 830.6303, 830.6304, 830.7200, 830.7370, 830.7570, 830.7950, 835.2110 and 835.2210
- 48903906 B. Zacarias, "Stability of Metals of Glufosinato de Amonio TC," Test No. FOBR 6-26703 (July 30, 2009), 77 pages, OPPTS 830.6313 and 870.6314

Company Official:

Robert Hawk

· Signature:

Company Name: Company Contact: Orion GFS, LLC Robert Hawk

Source Dynamics LLC Agent for Orion GFS, LLC rhawk@solerasd.com telephone (928) 342-3489

Chest sist



### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

August 14, 2012

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

OPP Decision Number: D-468534

EPA File Symbol or Registration Number: 88685-G

Product Name: GLUFOSINATE-AMMONIUM TECHNICAL

EPA Receipt Date: 10-Aug-2012 EPA Company Number: 88685

Company Name: ORION GFS, LLC

ROBERT HAWK SOURCE DYNAMICS LLC ORION GFS, LLC 12230 E DEL NORTE YUMA, AZ 85377-7355

SUBJECT: Receipt of Registration Application Subject to Registration Service Fee

#### Dear Registrant:

The Office of Pesticide Programs has received your application and certification of payment. If you submitted data with this application, the results of the PRN-2011-3 screen will be communicated separately. During the administrative screen, the Office of Pesticide Programs has determined that this Action is subject to a Pesticide Registration Service Fee as defined in the Pesticide Registration Improvement Act.

The Action has been identified as Action Code: R310

NEW PRODUCT; NON-FAST TRACK (INCLUDES REVIEWS OF PRODUCT CHEMISTRY; ACUTE TOXICITY; PUBLIC HEALTH PEST EFFICACY);

No additional payment is due at this time.

If you have any questions, please contact the Pesticide Registration Service Fee Ombudsman at (703) 308-9362.

Sincerely.

Front End Processing Staff

Information Technology & Resources Management Division

## Fee for Service

{921730v~

This package includes the following	for Division
<ul><li>New Registration</li><li>Amendment</li></ul>	○ AD ○ BPPD
<ul><li>Studies? □ Fee Waiver?</li><li>□ volpay % Reduction:</li></ul>	Risk Mgr. 23
Receipt No. S- EPA File Symbol/Reg. No. Pin-Punch Date:	921730 88685-G 8/10/2012
This item is NOT subject to	o FFS action.
Action Code:  Requested: \( \frac{730}{30} \)  Granted: \( \frac{310}{401} \)  Amount Due: \( \frac{4601}{4601} \)	Parent/Child Decisions:
Inert Cleared for Intended Use	Uncleared Indrt in Product
Reviewer: 5 46 Kource Remarks:	Date: \$\frac{\partial 12 \partial 2012}{2012}

Š,



RE: EPA Submission: Glufosinate-Ammonium Technical (Reg# 88685-G) Robert Hawk

to:

Elizabeth Nguyen 08/21/2012 07:42 PM

Cc:

Sree Nair Hide Details

From: "Robert Hawk" <rhawk@solerasd.com>

To: Elizabeth Nguyen/DC/USEPA/US@EPA

Cc: Sree Nair/DC/USEPA/US@EPA

#### 1 Attachment



Glufosinate Metals.pdf

Dear Ms. Nguyen,

The reformatted and renumbered report is attached. We apologize for the inconvenience.

The GLP statement on page 3 is not signed by the study sponsor or study director, but is acceptable per PR Notice 2011-3, page 19.

Again, our apologies.

Robert Hawk

From: Elizabeth Nguyen [mailto:Nguyen.Elizabeth@epamail.epa.gov]

Sent: Tuesday, August 21, 2012 8:45 AM

**To:** rhawk@solerasd.com **Cc:** nair.sree@epa.gov

Subject: EPA Submission: Glufosinate-Ammonium Technical (Reg# 88685-G)

Dear Mr. Robert Hawk,

This email is to address one issue found regarding your application for registration of submission Glufosinate-Ammonium Technical (Reg # 88685-G).

• Study #6: <u>Stability of Metals of Glufosinato de Amonio TC</u>. A statement of compliance or non-compliance with the Good Laboratory Practices Standards contained in 40CFR160 is required for all studies (except range finding studies and supplements to previously submitted studies) submitted to EPA. This statement must appear as page 3 of all studies, and must be signed and dated by the <u>study sponsor</u>, the <u>study submitter</u>, and the study director. Please see 40 CFR 160.12 for specific guidance. <u>And</u>, each study must be continuously paginated from the title page through the end of the study and all appendices, except for the Confidential Attachment or Supplemental Statement of Confidentiality Claims, if present, even when the study is large enough to span more than one physical volume.

Please verify this and send the corrections either by email or to our secure fax line at 703-305-5060. Please contact me if you have any questions.

Sincerely,

#### Elizabeth Nguyen

EPA Contractor 2777 Crystal Drive, S-4828 One Potomac Yard Arlington, VA 22202 703-305-6177 (p) 703-305-5060 (f) nguyen.elizabeth@epa.gov

# PRIA 2 – 21 Day Content Screen Review Worksheet (EPA/OPP Use Only) 2-(0-(2/23/09)

21 Da Expe Divis	rts In-Processing Signature:	5-/ 2- Pate	Fee I	Paid: Y	es <u>~</u>	
EPA I	Reg. Number: 88685-G EPA Receipt Date: 8-	10-	12			
Items for Review				Yes	No	N/A*
1	Application Form (EPA Form 8570-1)(link to form) signed & complete including package type					
2	Confidential Statement of Formula all boxes completed, form signed, and dated (EPA Form 8570-4) (Link to form)					
	a) All inerts (link to http://www.epa.gov/opprd001/inerts/), including fragrances, approved for the proposed uses (see	yes	no			
	Footnote A) NO 'MENTS					
3	Certification with Respect to Citation of Data (EPA Form 8570-34) (Link to form) completed and signed (N/A if 100% repack)					
	Certificate and data matrix consistent					
	If applicant is relying on data that are compensable, is the offer to pay statement included. (see Footnote B)	yes	no			
	If applicable, is there a letter of Authorization for exclusive use on	ılv.				
4	Formulator's Exemption Statement (EPA Form 8570-27) (Link to form) completed and signed (N/A if source is unregistered or applicant owns the technical)					×
5	Data Matrix (EPA Form 8570-35) (Link to form) both internal and external copies (PR 98-5) (Link to PR 98-5) completed and signed (N/A if 100% repack)					
	a) Selective Method (Fee category experts use)	yes	no			
	b) Cite-All (Fee category experts use)					
	c) Applicant owns all data (Fee category experts use)			10 mm vi		
6	5 Copies of Label (link to <a href="http://www.epa.gov/oppfead1/labeling/lrm/">http://www.epa.gov/oppfead1/labeling/lrm/</a> ) (Electronic labels on CD are encouraged and guidance is available)( link to <a href="http://www.epa.gov/pesticides/regulating/registering/submissions/index.htm#labels">http://www.epa.gov/pesticides/regulating/registering/submissions/index.htm#labels</a> )					

7	Is the data package consistent with PR Notice 86-5 (link to PRN 86-5)	/	
8	Notice of Filing (link to <a href="http://www.epa.gov/pesticides/regulating/tolerance_petitions.htm">http://www.epa.gov/pesticides/regulating/tolerance_petitions.htm</a> ) included with petitions (link to <a href="http://www.epa.gov/pesticides/regulating/tolerances.htm">http://www.epa.gov/pesticides/regulating/tolerances.htm</a> )		×
9	If applicable for conventional applications, reduced risk rationale (link to http://www.epa.gov/opprd001/workplan/reducedrisk.html)		<i></i>
10	Required Data (link to <a href="http://www.epa.gov/pesticides/regulating/data_requirements.htm">http://www.epa.gov/pesticides/regulating/data_requirements.htm</a> ) and/or data waivers. See Footnote C.  a) List study (or studies) not included with application		

#### Comments:

\* Plegistrant was intacted 8/21 regarding Study\*6 to provide the sponsor and submitter signatures for the GIP statement and to pagnate the entire study. Plegistrant replied later that day to refute the need for the signatures but replaced the angular Study with a Study that was paginated. Studies passed PRN 1703 review.

A Technical and impurities only, no mens to review.

Tacket pussed.

21

MAD: 489039

\* N/A - Not Applicable

#### Footnotes

A. During the 21 day initial content review, all CSFs will be reviewed to determine whether all inerts listed, including fragrances, are approved for the proposed uses. If an unapproved inert is identified, the applicant must either 1) resolve the inert issue by, for example, removing the inert, substituting it with an approved inert, submitting documentation that EPA approved the inert for the proposed pesticidal uses, correcting mistakes on the CSF, etc. or 2) provide the data to support OPP approval of the inert or 3) withdraw the application. Removing or substituting an inert ingredient will require a new CSF and may require submission of data. All information, forms, data and documentation resolving the inert issue must have been received by the Agency or the application withdrawn within the 21 day period, otherwise, the Agency will reject the application as described below.

To successfully complete this aspect of the 21 day initial content screen, applicants are **strongly encouraged** to verify that all inert ingredients have been approved for the application's uses **even** if a **product** is **currently registered** by consulting the inert Web

site [link to <a href="http://www.epa.gov/opprd001/inerts/lists.html">http://www.epa.gov/opprd001/inerts/lists.html</a>] and if the inert is not approved, to obtain the necessary inert approval prior to submitting an application to register a pesticide product containing that inert ingredient. Some inert ingredients are no longer approved for food uses or certain types of uses. The name and/or CAS number on a CSF must match the name and CAS number on this web site. Simple typographical errors in the name or CAS number have resulted in processing delays.

If an inert is not listed on the inert ingredient web site and the applicant believes that the inert has been approved, the applicant should contact the Inert Ingredient Assessment Branch (IIAB) at <a href="mailto:inertsbranch@epa.gov">inertsbranch@epa.gov</a> and resolve the issue. Copies of the correspondence with IIAB resolving the issue should accompany the application. All new inerts except PIP inerts are reviewed by IIAB. The IIAB should also be contacted for any questions on what supporting data needs to be submitted for and the Agency's inert review process. Questions on PIP inerts should be directed to the Chief of Microbial Pesticides Branch [Link to <a href="http://www.epa.gov/oppbppd1/biopesticides/contacts\_bppd.htm">http://www.epa.gov/oppbppd1/biopesticides/contacts\_bppd.htm</a>].

When a broad trade or proprietory name of an inert ingradient is

When a brand, trade, or proprietary name of an inert ingredient is listed on a CSF, additional information such as an alternate name of the inert, CAS number or other information [link to <a href="http://www.epa.gov/opprd001/inerts/tips.pdf">http://www.epa.gov/opprd001/inerts/tips.pdf</a>] must also be included to enable the Agency to determine if it has been approved. Each component of an inert mixture (including a fragrance) must be identified. In some cases, the supplier of the mixture or fragrance may need to provide this information to the Agency. Prior to the Agency's receipt of an application, applicants must arrange with a proprietary mixture or fragrance supplier to provide the component information to the Agency or promptly upon EPA's request. If the inert ingredients in a proprietary blend (including fragrances) cannot or are not identified or provided within the 21-day content review period, the Agency will reject the application.

During the 21 day content review, applicants should submit information to the individual identified by the Agency when the applicant is informed of an unapproved inert.

# Unapproved Inerts Identified on CSFs

All applications except conventional new products and PIPs

Once an unapproved inert is identified on a CSF, the Agency will contact the applicant with the following options:

- Correct the application by, for instance, correcting the inert's identity or CAS
  number, providing documentation that the inert has been approved, or
  removing the unapproved inert from the CSF or replacing it with one that is
  approved for the application's uses; or
- 2. Submit the information and data needed for the Agency to approve the unapproved inert. If this option is selected and implemented, the Agency may request an extension in the PRIA decision review timeframe to accommodate the inert review/approval process;

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of these options is selected and implemented by the applicant within the 21 day content review period, the Agency will reject the application and retain 25% of the full fee of the category identified.

# Conventional New Product Applications

When the Registration Division identifies an unapproved inert on a CSF with an application for a new product that the applicant has not identified as requiring an inert approval (R311, R312 or R313), it will contact the applicant with the following options:

- Correct the application by, for instance, correcting the inert's identity or CAS
  number, providing documentation that the inert has been approved, or
  removing the unapproved inert from the CSF or replacing it with one that is
  approved for the application's uses; or
- 2. Submit the information and data needed for the Agency to approve the unapproved inert, including any required petition to establish or amend a tolerance or exemption from a tolerance. (This option may change the PRIA category for the application, which could require a longer decision review time and a larger fee. If additional fees are due, they must be received by the Agency within the 21 day content review period.)
- 3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21-day content-review period, the Agency will reject the application and retain 25% of the appropriate fee for the new product-inert approval category.

# PIP Applications

When the Biopesticide and Pollution Prevention Division identifies an unapproved inert on a PIP CSF and a request to approve the inert does not accompany the application, it will contact the applicant with the following options:

- Correct the application by, for instance, correcting the spelling or name of the inert to that in 40 CFR 174, or providing documentation that the inert has been approved; or
- 2. Submit the information and data needed for the Agency to approve the unapproved inert. If an inert ingredient tolerance exemption petition is required, the petition must be received by the Agency and the B903 fee paid within the 21 day period. If this option is selected and implemented, the Agency will discuss harmonizing the timeframe for both actions.

3. Withdraw the application (the Agency retains 25% of the full fee for the fee category estimated); or

If none of the above options is selected and implemented during the 21 day content review period, the Agency will reject the application and retain 25% of the fee.

- B. A policy on documentation of offers to pay is still being developed, however, for a me-too or fast track (similar/identical) new product, R300 or A530, an application without the necessary authorizations of offers to pay will be placed into either R301 or A531. The Agency recommends that authorizations of offers to pay be submitted with other PRIA applications to avoid delays in the Agency's decision.
- C. Biopesticide applicants are advised to contact the Agency and discuss study waivers prior to submitting their application to the Agency. Documentation of such discussions should be submitted with the study waiver.

# Script for Rejection Phone calls

Contact Name: LOWERT HOWK
Phone #: 928-342-3489
Email: Mawk @ solerasd: com
First Call/Initials: Second Call/Initials:
Date: 8/21/12 er Date:
Time: ilus noo Time:
Time: 145 Am Time:
This is <u>Plizabeth Nauyen</u> , EPA contractor.
I'm calling regarding your submission in support of
Elufosinate Ammonium Technical (Reg. # 28685-G)
We have found the following deficiencies regarding:
PR Notice 86.5: (Yes)or No
Volume/Study Title:
Volume/Study Title: Study #6: VO(Spunsor/subnutter), HR
Volume/Study Title:
Volume/Study Title:
Additional volumes continued on back of page: Yes or No
Application Package: Yes or No
These deficiencies have been approved by EPA.  The corrections can be faxed to 703-305-5060/Attn:
Second Call/Email:
If we do not receive the corrections by, we will process
your submission, accordingly. Please direct all future calls and
correspondence to the appropriate FPA Pick Manager

# R 310

End Use (EP) or Manufacturing Use (MP) product or Technical Grade of the Active Ingredient (TGAI). Must submit Group A and B product chemistry data for each proposed product unless it's a 100% identical (repack): YES or NO (circle one)

Guideline	Group A: Product Chemistry Data	EP Data Submitted		MP Data Submitted		TGAI	
No.	Study Title	Yes	No	Yes	No	Yes	No
830.1550	Product Identity & Composition	X					
830.1600	Description of materials used to produce the product	X					
830.1650	Description of formulation process		1X				
830.1670	Discussion on the formation of impurities	X				<u> </u>	
830.1700	Preliminary analysis	X			<u> </u>		
830.1750	Certified limits (158.345)	X					
830.1800	Enforcement analytical method	X					

Guideline	Group B: Product Chemistry Data Study	EP Data Submitted		MP Data Submitted		TGAI	
No.	Title	Yes	No	Yes	No	Yes	No
830.6302	Color	X					
830.6303	Physical State	$\mathcal{X}^{'}$				<u> </u>	
830.6304	Odor	X					
830.6313	Stability to normal and elevated temperatures metal and metal ions				- 1-10 - 10 - 10 - 10 - 10 - 10 - 10 -		
830.6314	Oxidation/Reduction (Chemical incompatibility)	X					
830.6315	Flammability	X					
830.6316	Explodability		NA			<u> </u>	
830.6317	Storage stability		NA				<u> </u>
830.6319	Miscibility		NA				
830.6320	Corrosion Characteristics	<u> </u>	NA				<u></u>
830.6321	Dielectric Breakdown Voltage		NA			Š	
830.7000	рН	X					<u> </u>
830.7050	UV/ Visible Absorption						<u> </u>
830.7100	Viscosity		NA				
830.7200	Melting Point						
830.7220	Boiling Point						
830.7300	Density	X					
830.7370	Dissociation Constant						
830.7550	Partition Coefficient						
830.7840	Water Solubility	\$9. 2					
830.7950	Vapor Pressure						

Grayed out = data not required

## Online Payment

# Step 3: Confirm Payment

1 2 3

Thank you.

Your transaction has been successfully completed.

Pay.gov Tracking Information

Application Name: PRIA Service Fees

Pay.gov Tracking ID: 257HNSPI Agency Tracking ID: 74341675827

Transaction Date and Time: 08/02/2012 15:21 EDT

Payment Summary

Address Information

Account Holder Name: Terry K Stojic

7364 E Red Billing Address: Hawk Street

**Billing Address** 

City: Mesa

State / Province: AZ

Zip / Postal 85207 Code:

Country: USA

**Account Information** 

Card Type: Visa

Card Number: \*\*\*\*\*\*\*5830

**Decision Number:** Registration

Number:

Orion GFS,

Company Name: LLC

Company 88685 Number:

Action Code: R310

Payment Information

Payment Amount: \$4,807.00 Transaction Date 08/02/2012

and Time: 15:21 EDT

Please read instructions on reverse before pletting form	. Fo	m Appro OM	B No. 2070-0060	Print Form	
Environmental Protes Washington, D	ection Agency	Ar	gistration nendment her	OPP Identifier Number	
Applic	ation for Pesticide	Section I			
1, Company/Product Number 88685-x	2. EPA Prode Kathryn M			Posed Classification	
4. Company/Product (Name) Glufosinate-Ammonium Technical	PM <i>8</i> 23				
5. Name and Address of Applicant (Include ZIP Code)  Orion GFS, LLC 12230 E. Del Norte, Yuma, AZ 85367-7355  Check if this is a new address	(b)(i), my p to: EPA Reg.	No. 88685-1		FIFRA Section 3(c)(3) mposition and labeling echnical	
	Section - II				
Amendment - Explain below.  Resubmission in response to Agency letter deted  Notification - Explain below.  Final printed labels in response to Agency letter dated  Me Too* Application.  Other - Explain below.					
Explanation: Use additional page(s) if necessary. (For see This is a registration application for a technical producting redient in this product is not identical to that in 8	uct that is substantially sim 8685-1.	ilar to other regi	stered products.	The percent active	
	Section - III				
1. Material This Product Will Be Packaged In:  Child-Resistant Packaging  Yes  X No  Certification must  If "Yes"  No. p		No. per	Type of Container  Metel  Hastic Gless Paper		
be submitted Unit Packaging wgt. conta	iner Package wgt	container	Other (S	pecify)	
	s) Retail Container not retail		on of Label Direction On Label On Labeling accom		
6. Menner in Which Label is Affixed to Product	ithograph Paper glued Stenciled	Other Plastic	DICGAC		
	Section - IV				
1. Contact Point (Complete items directly below for identi		ntacted, if necesse		6 6	
Name Robert Hawk	Title Agent, Orion GF5, L	_C		a No. (Include Area Code) -3489° ၘ° ၘ	
Cer i certify that the statements I have made on this for I acknowledge that any knowingly felse or misleadin both under applicable law.	tification n and all attachments thereto g statement may be punishal	are true, accurate la by fine or impri	o a e e e e e and complete. sonment <sub>e</sub> og <sub>e e e e</sub>	8. Date Application Received (Stamped)	
2. Signature  Check Hask	3. Title Agent, Orion ATO, L	LC	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6		
4. Typed Name Robert Hawk	5. Date July 24, 2012			( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	

Ļ	Į.					
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY 1200	) Pennsylvania	Avenue, N.W. WASHINGTON, D.C. 20460				
Paperwork Reduction Act Notice: The public reporting burden for this collection of informations per response for reregistration and special review activities, including time for reading regarding burden estimate or any other aspect of this collection of information, including su (2822T), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washi	g the instructions an aggestions for reduci	d completing the necessary forms. Send comments ng the burden to: Director, Collection Strategies Division				
Certification with Respect to	o Citation of Data	ì				
Applicant's/Registrant's Name, Address, and Telephone Number		EPA Registration Number/File Symbol				
Orion GFS, LLC 12230 E. Del Norte Yuma, AZ 85367-7355		88685-x				
Active Ingredient(s) and/or representative test compound(s) glufosinate-ammonium		Date July 24, 2012				
General Use Pattem(s) (list all those claimed for this product using 40 CFR Part 15 terrestrial food, terrestrial nonfood	58)	Product Name Glufosinate-Ammonium Technical				
NOTE: If your product is a 100% repackaging of another purchased EPA-registere to submit this form. You must submit the Formulator's Exemption Statement (EPA)		or all the same uses on your label, you do not need				
I am responding to a Data-Call-In Notice, and have included with this form a list of used for this purpose).	companies sent of	fers of compensation (the Data Matrix form should be				
SECTION I: METHOD OF DATA SUPPO	ORT (Check one m	nethod only)				
I am using the cite-all method of support, and have included with this form a list of companies sent offers of compensation (the Data Matrix form should be used for this purpose).	selective method)	ective method of support (or cite-all option under the , and have included with this form a completed list of  (the Data Matrix form must be used).				
SECTION II: GENERAL C	FFER TO PAY					
[Required if using the cite-all method or when using the cite-all option under the selective method to satisfy one or more data requirements] I hereby offer and agree to pay compensation, to other persons, with regard to the approval of this application, to the extent required by FIFRA.						
SECTION III: CERTI	FICATION					
SECTION III: CERTI  I certify that this application for registration, this form for reregistration, or this Data application for registration, the form for reregistration, or the Data-Call-In response method is indicated in Section I, this application is supported by all data in the Age identical or substantially similar product, or one or more of the ingredients in this prunder the data requirements in effect on the date of approval of this application if the similar composition and uses.	-Call-In response in addition, if the ncy's files that (1) roduct; and (2) is a	cite-all option or cite-all option under the selective concern the properties or effects of this product or an type of data that would be required to be submitted				
I certify that this application for registration, this form for reregistration, or this Data application for registration, the form for reregistration, or the Data-Call-In response method is indicated in Section I, this application is supported by all data in the Age identical or substantially similar product, or one or more of the ingredients in this punder the data requirements in effect on the date of approval of this application if the	-Call-In response in the control of	cite-all option or cite-all option under the selective concern the properties or effects of this product or an type of data that would be required to be submitted ght the initial registration of a product of identical or				
I certify that this application for registration, this form for reregistration, or this Data application for registration, the form for reregistration, or the Data-Call-In response method is indicated in Section I, this application is supported by all data in the Age identical or substantially similar product, or one or more of the ingredients in this punder the data requirements in effect on the date of approval of this application if the similar composition and uses.  I certify that for each exclusive use study cited in support of this registration or rem	-Call-In response in the new files that (1) roduct; and (2) is a she application source egistration, that I are is not an exclusive the study in support (e) I have notified and/or 3(c)(2)(B) or in additional in the study in support (e) I have notified and/or 3(c)(2)(B) or in additional in the study in support (e) I have notified and/or 3(c)(2)(B) or in additional in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in support (e) I have notified and/or 3(c)(2)(B) or in the study in	cite-all option or cite-all option under the selective concern the properties or effects of this product or an a type of data that would be required to be submitted ght the initial registration of a product of identical or me the original data submitter or that I have obtained a use study, either: (a) I am the original data to of this application; (c) all periods of eligibility for in writing the company that submitted the study and of FIFRA; and (ii) to commence negotiations to				
I certify that this application for registration, this form for reregistration, or this Data application for registration, the form for reregistration, or the Data-Call-In response method is indicated in Section I, this application is supported by all data in the Age identical or substantially similar product, or one or more of the ingredients in this punder the data requirements in effect on the date of approval of this application if the similar composition and uses.  I certify that for each exclusive use study cited in support of this registration or rerest the written permission of the original data submitter to cite that study.  I certify that for each study cited in support of this registration or reregistration that submitter; (b) I have obtained the permission of the original data submitter to use to compensation have expired for the study; (d) the study is in the public literature; or have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) adetermine the amount and terms of compensation, if any, to be paid for the use of I certify that in all instances where an offer of compensation is required, copies of accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and we such evidence to the Agency upon request, I understand that the Agency may initic conformity with FIFRA.	-Call-In response in the addition, if the ncy's files that (1) roduct; and (2) is a she application source egistration, that I are is not an exclusive he study in support (e) I have notified and/or 3(c)(2)(B) of the study.  all offers to pay control of the submitted to attent action to deny,	cite-all option or cite-all option under the selective concern the properties or effects of this product or an a type of data that would be required to be submitted ght the initial registration of a product of identical or me the original data submitter or that I have obtained as use study, either: (a) I am the original data to of this application; (c) all periods of eligibility for in writing the company that submitted the study and of FIFRA; and (ii) to commence negotiations to me to the registration of my product in the Agency upon request. Should I fail to produce cancel or suspend the registration of my product in				
I certify that this application for registration, this form for reregistration, or this Data application for registration, the form for reregistration, or the Data-Call-In response method is indicated in Section I, this application is supported by all data in the Age identical or substantially similar product, or one or more of the ingredients in this punder the data requirements in effect on the date of approval of this application if tis similar composition and uses.  I certify that for each exclusive use study cited in support of this registration or rerethe written permission of the original data submitter to cite that study.  I certify that for each study cited in support of this registration or reregistration that submitter; (b) I have obtained the permission of the original data submitter to use the compensation have expired for the study; (d) the study is in the public literature; or have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) adetermine the amount and terms of compensation, if any, to be paid for the use of I certify that in all instances where an offer of compensation is required, copies of accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and we such evidence to the Agency upon request, I understand that the Agency may initial.	-Call-In response in the addition, if the ncy's files that (1) roduct; and (2) is a she application souther application, that I are subject to the study in support (e) I have notified and/or 3(c)(2)(B) of the study.  The submitted to attend a action to deny, it are true, accurate the submitted to a submit	cite-all option or cite-all option under the selective concern the properties or effects of this product or an a type of data that would be required to be submitted ght the initial registration of a product of identical or me the original data submitter or that I have obtained as use study, either: (a) I am the original data to of this application; (c) all periods of eligibility for in writing the company that submitted the study and fFIFRA; and (ii) to commence negotiations to mpensation and evidence of their delivery in the Agency upon request. Should I fail to produce cancel or suspend the registration of my product in the applicable fail.				
I certify that this application for registration, this form for reregistration, or this Data application for registration, the form for reregistration, or the Data-Call-In response method is indicated in Section I, this application is supported by all data in the Age identical or substantially similar product, or one or more of the ingredients in this prunder the data requirements in effect on the date of approval of this application if the similar composition and uses.  I certify that for each exclusive use study cited in support of this registration or reretthe written permission of the original data submitter to cite that study.  I certify that for each study cited in support of this registration or reregistration that submitter; (b) I have obtained the permission of the original data submitter to use the compensation have expired for the study; (d) the study is in the public literature; or have offered (I) to pay compensation to the extent required by sections 3(c)(1)(F) and determine the amount and terms of compensation, if any, to be paid for the use of I certify that in all instances where an offer of compensation is required, copies of a accordance with sections 3(c)(1)(F) and/or 3(c)(2)(B) of FIFRA are available and we such evidence to the Agency upon request, I understand that the Agency may initic conformity with FIFRA.  I certify that the statements I have made on this form and all attachments to	-Call-In response in the addition, if the ncy's files that (1) roduct; and (2) is a she application souther application, that I are subject to the study in support (e) I have notified and/or 3(c)(2)(B) of the study.  The submitted to attend a action to deny, it are true, accurate the submitted to a submit	cite-all option or cite-all option under the selective concern the properties or effects of this product or an a type of data that would be required to be submitted ght the initial registration of a product of identical or me the original data submitter or that I have obtained a use study, either: (a) I am the original data at of this application; (c) all periods of eligibility for in writing the company that submitted the study and fFIFRA; and (ii) to commence negotiations to mpensation and evidence of their delivery in the Agency upon request. Should I fail to produce cancel or suspend the registration of my product in the agency upon the company that submitted the produce cancel or suspend the registration of my product in the agency upon the company that can upon the company that any under applicable fag.				

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

	D	ATA MATRIX			
Date 7/24/2012		EPA Reg No./File Symbol 88685-x		Page 1 of 4	
Applicant's/Registrant's Name & A	ddress		Product		
Orion GFS, LLC, 12230 E. Del Norte,	Yuma, AZ 85367-7355		Glufosinate-Ammonium Technical		
Ingredient Glufosinate-Ammonium					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.1550	product identification and disclosure of ingredients	NEW	Orion GFS, LLC	OWN	
830.1600	description of beginning materials	NEW	Orion GFS, LLC	OWN	
830.1620	description of manufacturing process	NEW	Orion GFS, LLC	OWN	
830.1670	discussion of formation of impurities	NEW	Orion GFS, LLC	OWN	
830.1700	preliminary analysis	NEW	Orion GFS, LLC	OWN	
830.1750	certification of limits	NEW	Orion GFS, LLC	OWN	
830.1800	enforcement analytical method	NEW	Orion GFS, LLC	OWN	
830.6302	color	NEW	Orion GFS, LLC	OWN	
830.6303	physical state	NEW	Orion GFS, LLC	OWN	
830.6304	odor	NEW	Orion GFS, LLC	OWN	
830.6313	stability to normal and elevated temperatures	NEW 00142429	Orion GFS, LLC Clariant Corporation	OWN OLD	
830.6314	oxidation / reduction: chemical incompatibility	NEW 00142429	Orion GFS, LLC Clariant Corporation	OWN OLD	
830.6315	flammability	00142429	Clariant Corporation	OLD	
830.6316	ွင်xbီးဝှုတို့apilith		not applicable		
830.63 77	storage stability		not applicable; not a formulation		
Signature  Name and Title: Robert Hawk, Agent, Orion GF					Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for registration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

	DAT	A MATRIX			
Date 7/24/2012			EPA Reg No./File Symbol 88685-x		Page 2 of 4
Applicant's/Registrant's Name & A	ddress		Product		
Orion GFS, LLC, 12230 E. Del Norte,	Yuma, AZ 85367-7355		Glufosinate-Ammonium Technical		
Ingredient Glufosinate-Ammonium					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
630.6319	miscibility		not applicable		
830.6320	corrosion characteristics		not applicable; not a formulation		
830.6321	dielectric breakdown voltage		not applicable		
830.7000	На	NEW	Orion GFS, LLC	OWN	
830.7050	UV / visible absorption	48176701	Bayer Cropscience LP	PAY	
830.7100	viscosity		not applicable		
830.7200	metting point	NEW	Orion GFS, LLC	OWN	
830.7220	boiling point		not applicable		
830.7300	density / relative density	NEW	Orion GFS, LLC	OWN	
830.7370	dissociation constant in water	NEW	Orion GFS, LLC	OWN	
830.7570	octanol / water partition coefficient	NEW	Orion GFS, LLC	OWN	
830.7840	water solubility	NEW	Orion GFS, LLC	OWN	
830.7860	solubility in organic solvents	00142429	Clariant Corporation	OLD	
Signature Control of the Signature of th		-	Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for reregistration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

		DATA MATRIX			
Date 7/24/2012			EPA Reg No./File Symbol 88685-x	Page 3 of 4	
Applicant's/Registrant's Name & A	ddress		Product		
Orion GFS, LLC, 12230 E. Del Norte,	Yuma, AZ 85367-7355		Glufosinate-Ammonium Technical		
Ingredient Glufosinate-Ammonium					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
830.7950	vapor pressure	NEW 44032901	Orion GFS, LLC Agrevo USA Co.	OWN PAY	
870.1100	acute oral toxicity: rat	00142431 00142432	Clariant Corporation	OLD	
870.1200	acute dermal toxicity	00142436 00142437	Clariant Corporation	OLD	
870.1300	acute inhalation toxicity	00144337	Clariant Corporation	OLD	
870.2400	acute eye irritation	00142438	Clariant Corporation	OLD	
870.2500	acute dermal irritation	00142438	Clariant Corporation	OLD	
870.2600	skin sensitization	00142439	Clariant Corporation	OLD	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2					
6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6					
Signature Cobert 4	lusk		Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

	DAT	A MATRIX			, particular,
Date 7/24/2012			EPA Reg No./File Symbol 88685-x		Page 4 of 4
Applicant's/Registrant's Name & A	ddress		Product		
Orion GFS, LLC, 12230 E. Del Norte,	Yuma, AZ 85367-7355		Giufosinate-Ammonium Technical		
Ingredient Glufosinate-Ammonium					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
other Series 870: cite-all	Toxicology: generic data	multiple	Bayer Cropscience LP	PAY	
Series 810: cite-all	Product Performance: generic data		Bayer Environmental Science	PAY	
Series 835: cite-all	Fate, Transport and Transformation: generic data		Spray Drift Task Force	PAY	
Series 840: cite-al	Spray Drift: generic data		Outdoor Residential Exposure Task Force	PAY	
Series 850: cite-al	Ecological Effects: generic data		Agricultural Reentry Task Force	PAY	
Series 860: cite-all	Residue Chemistry: generic data		FIFRA Endangered Species Task Force	PAY	,
Series 875: cite-all	Occupational and Residential Exposure: generic data		Residential Exposure Joint Venture	PAY	
			Agricultural Handlers Exposure Task Force	PAY	
× · · · · · · · · · · · · · · · · · · ·	0 0				
Signature Cheek	Hank		Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for registration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

		DATA MATRI	X			
Date 7/24/2012			EPA Reg No./File Symbol 88685-x		Page 1 of 4	
Applicant's/Registrant's Name & Ad	ddress			Product		, men
Orion GFS, LLC, 12230 E. Del Norte, Y	Yuma, AZ 85367-7355			Glufosinate-Ammonium Technical		
ngredient Glufosinate-Ammonium						
Guideline Reference Number	Guideline Study Name	MRID Nu	mber	Submitter	Status	Note
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC	OWN	
				Orion GFS, LLC Clariant Corporation	OWN OLD	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0				Orion GFS, LLC Clariant Corporation	OWN OLD	
ରୁ ବାଳ ସହାୟ				Clariant Corporation	OLD	
				not applicable		
	้ง ัง ัง ๖ ๐ ๑ <i>๑</i> ๑ ๓			not applicable; not a formulation		
Signature Adult	There			Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

	DAT	A MATRIX			
Date 7/24/2012			EPA Reg No./File Symbol 88685-x		Page 2 of 4
Applicant's/Registrant's Name & A	uddress		Product		pl comments
Orion GFS, LLC, 12230 E. Del Norte,	Yuma, AZ 85367-7355		Glufosinate-Ammonium Technical		
Ingredient Glufosinate-Ammonium					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			not applicable		
			not applicable; not a formulation		
			not applicable		
			Orion GFS, LLC	OWN	
			Bayer Cropscience LP	PAY	
			not applicable		
			Orion GFS, LLC	OWN	
			not applicable		
			Orion GFS, LLC	OWN	
			Orion GFS, LLC	OWN	
C C & 600 C C & 5			Orion GFS, LLC	OWN	
2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			Orion GFS, LLC	OWN	
0 00 000			Clariant Corporation	OLD	
Signature.	Think		Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460. Do not send the form to this address.

Do not send the form to this address.					
		DATA MATRIX			
Date 7/24/2012			EPA Reg No./File Symbol 88685-x		Page 3 of 4
Applicant's/Registrant's Name & A	Address	W	Product		
Orion GFS, LLC, 12230 E. Del Norte,	Yuma, AZ 85367-7355		Glufosinate-Ammonium Technical		
Ingredient Glufosinate-Ammonium					
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Orion GFS, LLC Agrevo USA Co.	OWN PAY	
			Clariant Corporation	OLD	
			Clariant Corporation	OLD	
			Clariant Corporation	OLD	
			Clariant Corporation	OLD	
			Clariant Corporation	OLD	
			Clariant Corporation	OLD	
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
\$ n 4 000					
	\$\psi\$ \$\psi\$ \$\psi\$ \$\psi\$ \$\psi\$ \$\psi\$ \$\psi\$				
Signature Chart A	Park		Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

Paperwork Reduction Act Notice: The public reporting burden for this collection of information is estimated to average 0.25 hours per response for registration activities and 0.25 hours per response for registration and special review activities, including time for reading the instructions and completing the necessary forms. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden to: Director, OPPE Information Management Division (2137), U.S. Environmental Protection Agency, 401 M Street, S.W., Washington, DC 20460.

		DATA MATRIX			
Date 7/24/2012  Applicant's/Registrant's Name & Address  Orion GFS, LLC, 12230 E. Del Norte, Yuma, AZ 85367-7355			EPA Reg No./File Symbol 88685-x		Page 4 of 4
			Product Glufosinate-Ammonium Technical		
Guideline Reference Number	Guideline Study Name	MRID Number	Submitter	Status	Note
			Bayer Cropscience LP	PAY	
			Bayer Environmental Science	PAY	
			Spray Drift Task Force	PAY	
			Outdoor Residential Exposure Task Force	PAY	
			Agricultural Reentry Task Force	PAY	
			FIFRA Endangered Species Task Force	PAY	,
			Residential Exposure Joint Venture	PAY	
			Agricultural Handlers Exposure Task Force	PAY	
A 6					
00000000000000000000000000000000000000					
	0 0				
Signature Color t Z	last		Name and Title: Robert Hawk, Agent, Orion GFS, LLC		Date: 7/24/2012

\*Confidential Statement of Formula may be entitled to confidential treatment\*